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# Anti-RIP2 Antibody

Catalog # ABO11169

## Product Information

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| **Application** | WB |
| **Primary Accession** | O43353 |
| **Host** | Rabbit |
| **Reactivity** | Human, Mouse, Rat |
| **Clonality** | Polyclonal |
| **Format** | Lyophilized |
| **Description** | Rabbit IgG polyclonal antibody for Receptor-interacting serine/threonine-protein kinase 2(RIPK2) detection. Tested with WB in Human;Mouse;Rat. |
| **Reconstitution** | Add 0.2ml of distilled water will yield a concentration of 500ug/ml. |

## Additional Information

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| **Gene ID** | 8767 |
| **Other Names** | Receptor-interacting serine/threonine-protein kinase 2, 2.7.11.1, CARD-containing interleukin-1 beta-converting enzyme-associated kinase, CARD-containing IL-1 beta ICE-kinase, RIP-like-interacting CLARP kinase, Receptor-interacting protein 2, RIP-2, Tyrosine-protein kinase RIPK2, 2.7.10.2, RIPK2, CARDIAK, RICK, RIP2 |
| **Calculated MW** | 61195 |
| **Application Details** | Western blot, 0.1-0.5 □g/ml, Human, Rat, Mouse |
| **Subcellular Localization** | Cytoplasm . |
| **Tissue Specificity** | Detected in heart, brain, placenta, lung, peripheral blood leukocytes, spleen, kidney, testis, prostate, pancreas and lymph node. |
| **Source** | Eukaryota |
| **Protein Name** | Receptor-interacting serine/threonine-protein kinase 2 |
| **Contents** | Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3. |
| **Immunogen** | A synthetic peptide corresponding to a sequence at the C-terminus of human RIP2(495-514aa DIQGEEFAKVIVQKLKDNKQ), different from the related rat and mouse sequences by one amino acid. |
| **Purification** | Immunogen affinity purified. |

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| **Cross Reactivity** | No cross reactivity with other proteins |
| **Storage** | At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing. |
| **Sequence Similarities** | Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family. |

## Protein Information

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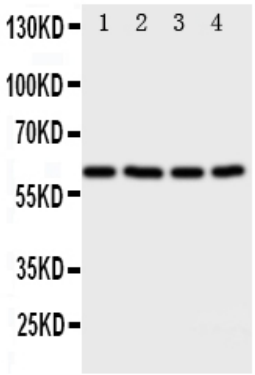
| **Name** | RIPK2 {ECO:0000303\|PubMed:30026309, ECO:0000312\|HGNC:HGNC:10020} |
| **Function** | Serine/threonine/tyrosine-protein kinase that plays an essential role in modulation of innate and adaptive immune responses (PubMed:14638696, PubMed:17054981, PubMed:21123652, PubMed:28656966, PubMed:9575181, PubMed:9642260). Acts as a key effector of NOD1 and NOD2 signaling pathways: upon activation by bacterial peptidoglycans, NOD1 and NOD2 oligomerize and recruit RIPK2 via CARD-CARD domains, leading to the formation of RIPK2 filaments (PubMed:17054981, PubMed:17562858, PubMed:21123652, PubMed:22607974, PubMed:28656966, PubMed:29452636, PubMed:30026309). Once recruited, RIPK2 autophosphorylates and undergoes 'Lys-63'-linked polyubiquitination by E3 ubiquitin ligases XIAP, BIRC2 and BIRC3, as well as 'Met-1'-linked (linear) polyubiquitination by the LUBAC complex, becoming a scaffolding protein for downstream effectors (PubMed:22607974, PubMed:28545134, PubMed:29452636, PubMed:30026309, PubMed:30279485, PubMed:30478312). 'Met-1'-linked polyubiquitin chains attached to RIPK2 recruit IKBKG/NEMO, which undergoes 'Lys-63'-linked polyubiquitination in a RIPK2-dependent process (PubMed:17562858, PubMed:22607974, PubMed:29452636, PubMed:30026309). 'Lys-63'-linked polyubiquitin chains attached to RIPK2 serve as docking sites for TAB2 and TAB3 and mediate the recruitment of MAP3K7/TAK1 to IKBKG/NEMO, inducing subsequent activation of IKBKB/IKKB (PubMed:18079694). In turn, NF-kappa-B is released from NF-kappa-B inhibitors and translocates into the nucleus where it activates the transcription of hundreds of genes involved in immune response, growth control, or protection against apoptosis (PubMed:18079694). The protein kinase activity is dispensable for the NOD1 and NOD2 signaling pathways (PubMed:29452636, PubMed:30026309). Contributes to the tyrosine phosphorylation of the guanine exchange factor ARHGEF2 through Src tyrosine kinase leading to NF-kappa-B activation by NOD2 (PubMed:21887730). Also involved in adaptive immunity: plays a role during engagement of the T-cell receptor (TCR) in promoting BCL10 phosphorylation and subsequent NF-kappa-B activation (PubMed:14638696). Plays a role in the inactivation of RHOA in response to NGFR signaling (PubMed:26646181). |
| **Cellular Location** | Cytoplasm. Cell membrane; Peripheral membrane protein. Endoplasmic reticulum. Note=Recruited to the cell membrane by NOD2 following stimulation by bacterial peptidoglycans |
| **Tissue Location** | Detected in heart, brain, placenta, lung, peripheral blood leukocytes, spleen, kidney, testis, prostate, pancreas and lymph node. |

## Background

RIPK2(Receptor-interacting serine/threonine-protein kinase 2), also known as CARD3, CARDIAK, RICK, RIP2, is an enzyme that in humans is encoded by the RIPK2 gene. It has 540-amino acid protein in length. Northern blot analysis revealed that RICK is expressed in various human tissues as 2.5- and 1.8-kb

mRNAs that differ due to alternative polyadenylation. RICK is a novel kinase that may regulate apoptosis induced by the FAS receptor pathway. This gene encodes a member of the receptor-interacting protein(RIP) family of serine/threonine protein kinases. The encoded protein contains a C-terminal □caspase recruitment domain(CARD), and is a component of signaling complexes in both the innate and adaptive immune pathways. It is a potent activator of □NF-kappa B □and inducer of apoptosis in response to various stimuli, CARDIAK(CARD-containing ICE-associated kinase) specifically interacted with the CARD of ICE/caspase-1, and this interaction correlated with the processing of pro-caspase-1 and the formation of the active caspase-1 p20 subunit.

## Images




Anti-RIP2 antibody, ABO11169, Western blottingAll lanes: Anti RIP2 (ABO11169) at 0.5ug/mlLane 1: A549 Whole Cell Lysate at 40ugLane 2: HELA Whole Cell Lysate at 40ugLane 3: PANC Whole Cell Lysate at 40ugLane 4: COLO320 Whole Cell Lysate at 40ugPredicted bind size: 61KDObserved bind size: 61KD

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